

Art Unit: 1717

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Heinisch on 5/19/2011.

The application has been amended as follows:

1. In claim 13, please insert --, wherein said additional metallic element is Mg-- directly after "said metallic coating to form an intermetallic compound".
2. In claim 15, please delete [wherein said additional metallic element is Mg, and] directly after "The method according to claim 13,".
3. Please cancel claims 24 and 25.
4. In claim 27, please insert --providing-- directly after "The method of claim 13, further comprising".

Reasons for Allowance

The following is an examiner's statement of reasons for allowance: Independent claim 13 recites diffusing an additional metallic element into said metallic coating wherein the additional metallic element is Mg, and an infra red radiation thermal treatment is applied to diffuse the Mg into the metallic coating without affecting an interface between the steel substrate and the metallic coating. The prior art of record fails to teach or suggest a method comprising utilizing an infra red thermal treatment to diffuse Mg into a metallic coating on a steel product.

Art Unit: 1717

The closest prior art is Goedicke (DE 19527515) and Bretez (FR 2655058). Goedicke teaches a process comprising diffusing an additional metallic element into a solid metallic coating of Zn, wherein the additional metallic element may be Mg, by a conventional thermal treatment. Goedicke fails to teach or suggest utilizing an infra red thermal treatment to affect the diffusing. Bretez teaches that iron can be slightly diffused into a molten metallic coating of Zn by a thermal treatment using infra red radiation. Bretez does not teach or suggest that the infra red thermal treatment can be used to diffuse iron into a solid coating of Zn as required by Goedicke. Additionally, Bretez teaches that other metallic elements such as aluminum can not be diffused into a Zn metallic coating. Therefore, since Bretez teaches that a molten coating of Zn is required for the diffusion, it would not have been obvious to one of ordinary skill in the art to modify Goedicke's method by using an infra red thermal treatment. Additionally, there is no reasonable expectation of success in diffusing Mg into a solid Zn coating using Bretez's thermal infra red treatment, as Bretez teaches that iron is only slightly diffused into a metallic Zn coating, and Al is practically not diffused at all. Thus, as outlined above and persuasively argued by the applicant it would not have been obvious to modify Goedicke's process by using Bretez's infra red thermal treatment. Furthermore, a thorough search of the prior art failed to teach or suggest this particular limitation. Therefore claim 13 is allowable over the prior art of record. Claims 14-23, 26 and 27 depend from claim 13, and are therefore also allowable over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

Art Unit: 1717

fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Election/Restrictions

Claim 13 is allowable. The restriction requirement, as set forth in the Office action mailed on 4/14/2008, has been reconsidered in view of the allowability of claims to the elected invention pursuant to MPEP § 821.04(a). **The restriction requirement is hereby withdrawn as to any claim that requires all the limitations of an allowable claim.** Claims 19 and 21 are no longer withdrawn from consideration because the claim(s) requires all the limitations of an allowable claim.

In view of the above noted withdrawal of the restriction requirement, applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

Once a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

Conclusion

Claims 13-23, 26 and 27 are allowed.

Art Unit: 1717

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT S. WALTERS JR whose telephone number is (571)270-5351. The examiner can normally be reached on Monday-Thursday, 9:00am to 7:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dah-Wei Yuan can be reached on (571)272-1295. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ROBERT S WALTERS JR/
May 19, 2011
Examiner, Art Unit 1717

/Dah-Wei D. Yuan/
Supervisory Patent Examiner, Art Unit 1717